

The “183 Patent” is entitled “Diaphragm Pump with Modified Valves” and is directed to

modifications in outlet valve or inlet valve assemblies that enhance the effectiveness and useful life of a pump. The '882 Patent is entitled "High Efficiency Diaphragm Pump" and is directed to a pump comprising a housing, diaphragm, pumping member or members, and drive, preferably a wobble plate drive. The wobble plate drive drives the pumping member or members on intake and discharge strokes. The diaphragm includes an annular zone or zones that flex when driven by the wobble plate drive and are configured to increase efficiency and provide for a long useful life. The '662 Patent and the '767 Patent are entitled "Modular System Board" and claim an apparatus for holding a variety of differently configured pumps, such as beverage pumps. The '767 Patent is based on a divisional application of the patent application leading to the '662 Patent, and both patents have the same disclosure and figures. The '936 Patent is entitled "Comestible Fluid Rack and Rail Apparatus and Method" and relates to a comestible fluid container rack for holding comestible fluid containers from which comestible fluid is dispensed. The '437 Patent is entitled "Bilge Pump" and is directed to a pump comprising a housing with an inlet and an outlet, a motor, and an impeller assembly coupled to the motor to provide an effective and dynamic flow path for the liquid being pumped through the outlet.

APPLICABLE LAW

"It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). In claim construction, courts examine the patent's intrinsic evidence to define the patented invention's scope. *See id.*; *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc'ns Group, Inc.*,

262 F.3d 1258, 1267 (Fed. Cir. 2001). This intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *See Phillips*, 415 F.3d at 1314; *C.R. Bard, Inc.*, 388 F.3d at 861. Courts give claim terms their ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent. *Phillips*, 415 F.3d at 1312–13; *Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

The claims themselves provide substantial guidance in determining the meaning of particular claim terms. *Phillips*, 415 F.3d at 1314. First, a term’s context in the asserted claim can be very instructive. *Id.* Other asserted or unasserted claims can also aid in determining the claim’s meaning because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term’s meaning. *Id.* Courts presume a difference in meaning and scope when a patentee uses different phrases in separate claims. *Id.* at 1314–15. For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id.* However, the doctrine of claim differentiation is not a “hard and fast rule,” and courts cannot use the doctrine to broaden claims beyond their correct scope, determined in light of the intrinsic record and relevant extrinsic evidence. *Seachange Int’l, Inc. v. C-COR, Inc.*, 413 F.3d 1361, 1369 (Fed. Cir. 2005); *see also Phillips*, 415 F.3d at 1312–15.

“[C]laims ‘must be read in view of the specification, of which they are a part.’” *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299

F.3d 1313, 1325 (Fed. Cir. 2002). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. *Phillips*, 415 F.3d at 1316. In these situations, the inventor's lexicography governs. *Id.* Also, the specification may resolve ambiguous claim terms "where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone." *Teleflex, Inc.*, 299 F.3d at 1325. But, "[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.'" *Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)); see also *Phillips*, 415 F.3d at 1323.

The prosecution history is another tool to supply the proper context for claim construction because a patent applicant may also define a term in prosecuting the patent. *Home Diagnostics, Inc., v. Lifescan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) ("As in the case of the specification, a patent applicant may define a term in prosecuting a patent."). The doctrine of prosecution history disclaimer "limits the interpretation of claims so as to exclude any interpretation that may have been disclaimed or disavowed during prosecution in order to obtain claim allowance." *Omeg Eng'g Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). For the doctrine to apply, the disclaimer of claim scope must be clear and unmistakable. *Computer Docking Station Corp. v. Dell, Inc.*, 519 F.3d 1366, 1374 (Fed. Cir. 2008). Prosecution disclaimer does not apply where the prosecution history is ambiguous. *See id.* at 1375.

Although extrinsic evidence can be useful, it is “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc.*, 388 F.3d at 862). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id.* at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert’s conclusory, unsupported assertions as to a term’s definition is entirely unhelpful to a court. *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.*

A claim is invalid as indefinite under 35 U.S.C. § 112, ¶ 2 if the claim fails to particularly point out and distinctly claim the subject matter the applicants regard as the invention. The primary purpose of the definiteness requirement is to ensure public notice of the scope of the patentee’s legal protection, such that interested members of the public can determine whether or not they infringe. *Halliburton Energy Servs., Inc. v. M-I, LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008). Thus, the definiteness inquiry focuses on how a skilled artisan understands the claims, and a claim is indefinite if the “accused infringer shows by clear and convincing evidence that a skilled artisan could not discern the boundaries of the claim based on the claim language, the specification, and the prosecution history, as well as her knowledge of the relevant art area.” *Id.* at 1249–50. “If the meaning of the claim is discernible, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree, . . . the claim [is] sufficiently clear to avoid invalidity on indefiniteness grounds.” *Exxon Res. & Eng’g Co. v. United States*, 265 F.3d 1371,

1375 (Fed. Cir. 2001). Thus, a claim is indefinite only if its meaning and scope are “insolubly ambiguous.” *Id.*

CLAIM TERMS

The “about” terms:

(1) “the ratio, R_3 , of the difference between the inlet valve center point and the valve plate inlet center point to R_2 is at least about 0.15;” (2) “ R_2 is in a range of 1.25 to about 1.45;” and (3) “ R_3 is in a range of about 0.15 to about 0.40”

Claim 10 of the ’183 Patent contains the term “the ratio, R_3 , of the difference between the inlet valve center point and the valve plate inlet center point to R_2 is at least about 0.15.” Claim 11 of the ’183 Patent contains the term “ R_2 is in a range of 1.25 to about 1.45.” Claim 12 of the ’183 Patent contains the term “ R_3 is in a range of about 0.15 to about 0.40.” The parties’ dispute centers around the meaning of “about” as it is used in these three terms.

SHURflo contends that the scope of the ratios R_2 and R_3 is entitled to reasonable breadth and proposes that the Court construe the term “about” to encompass a full increment or decrement of the least significant digit claimed—here, the digit in the hundredths decimal place. Accordingly, SHURflo contends that “at least about .15” means “at least .14,” “range of 1.25 to about 1.45” means “between 1.25 and 1.46,” and “range of about 0.15 to about 0.40” means “in a range of at least 0.14 to 0.41.” Furthermore, SHURflo argues that its proposed constructions are consistent with the level of precision chosen by the patentee when drafting the claims because the patentee chose to claim the ratios to two decimal places.

Defendants contend that the “about” terms must be construed narrowly because the ’183 Patent emphasizes precision and the differences in dimensions set out in a chart on column 7 of the ’183 Patent are minor. The column 7 chart compares ratios from the preferred embodiment of the inventive valve plate with ratios from a prior art valve plate using three decimal places. Defendants

assert that the narrow construction should include three decimal places instead of two because the patentee chose to use three decimal places in the column 7 chart and the inventor testified that those experienced in this field typically work with three decimal places for dimension measurements and tolerances. Defendants propose that the Court construe the term “about” to encompass all values that, when rounded to the hundredths decimal place, equal the claimed value. Thus, Defendants contend that “at least about .15” means “equal to or greater than 0.145,” “range of 1.25 to about 1.45” means “in the range of 1.25 to 1.454,” and “range of about 0.15 to about 0.40” means “in the range of 0.145 to 0.404.” SHURflo counters that nothing in the intrinsic record of the ’183 Patent supports the Defendants’ proposed constructions. Further, SHURflo contends that the patentee knew how to express the ratios and underlying measurements to three decimal places as he did in the column 7 chart, but chose to claim the ratios to two decimal places instead.

Because nothing in the specification supports any construction using qualitative boundaries, the Court will construe the “about” terms using quantitative boundaries. In addition, given the specification’s attention to numerical detail and the absence of qualitative disclosure regarding the range of the disclosed ratios, the flexibility afforded by the word “about” must be construed narrowly, as Defendants suggest. However, Defendants’ proffered constructions offer no flexibility in that they merely offer an extended range that numerically rounds to the claimed quantity. For example, where the claim states “at least about 0.15,” Defendants propose “equal to or greater than 0.145,” but if 0.145 is expressed to two decimal places, it is equivalent to 0.15 due to numerical rounding principles. Thus, Defendants’ proposals afford no flexibility, thereby giving the word “about” no meaning.

Although the inventor used three decimal places in comparing the ratios of the preferred embodiment of the inventive valve plate to the ratios from a prior art valve plate, the patentee used only two decimal places when discussing the inventive ratios in the specification and claims. The values in the patent comprise actual measured data and the ratios of same. As such, there is inherent approximation based upon the accuracy of the measuring tool. However, that approximation would not normally extend to a full digit in the least significant value of a measurement or a ratio. For example, if a measurement instrument measures to the hundredths decimal and the artisan measures 0.15, the result might reasonably be expressed as “about” 0.15 in order to reflect the fact that there is limited or no visibility in the thousandths decimal. In this context, “about” 0.15 would mean a number above 0.14 but below 0.16. When the intrinsic record is viewed as a whole, it is apparent from the patentee’s use of varying decimal places that the patentee expected a certain range of accuracy. In order for the term “about” to provide complete flexibility commensurate with the specification and claims, it should provide complete flexibility as to the next least significant decimal place. Thus, the “about” terms should be construed to include all values less than a full increment and greater than a full decrement of the least significant digit claimed.

Accordingly, the Court construes the term “the ratio, R_3 , of the difference between the inlet valve center point and the valve plate inlet center point to R_2 is at least about 0.15” to mean “the ratio R_3 (i.e., the difference between the inlet valve center point and the valve plate inlet center point divided by the ratio R_2) is greater than 0.14;” “ R_2 is in a range of 1.25 to about 1.45” to mean “the ratio R_2 (i.e., the value of the inlet valve radius divided by the value of the valve plate inlet radius) is between 1.25 and 1.459999;” and “ R_3 is in a range of about 0.15 to about 0.40” to mean “the ratio R_3 (i.e., the difference between the inlet valve center point and the valve plate inlet center point

divided by the ratio R2) is in the range of 0.140001 to 0.409999.” Further, in construing the “about” terms, the amount of decimal places used is not significant. What is significant is whether the measurement falls within the appropriate ranges.

“generally annular region”

Claim 12 of the ’882 Patent contains the term “generally annular region.” Though this term was originally disputed, during the hearing both sides agreed that the definition of the term is “a ring-shaped region or zone circumscribing a pumping member.” This definition is consistent with the claim language, the specification, and the plain meaning of the words, and is adopted accordingly.

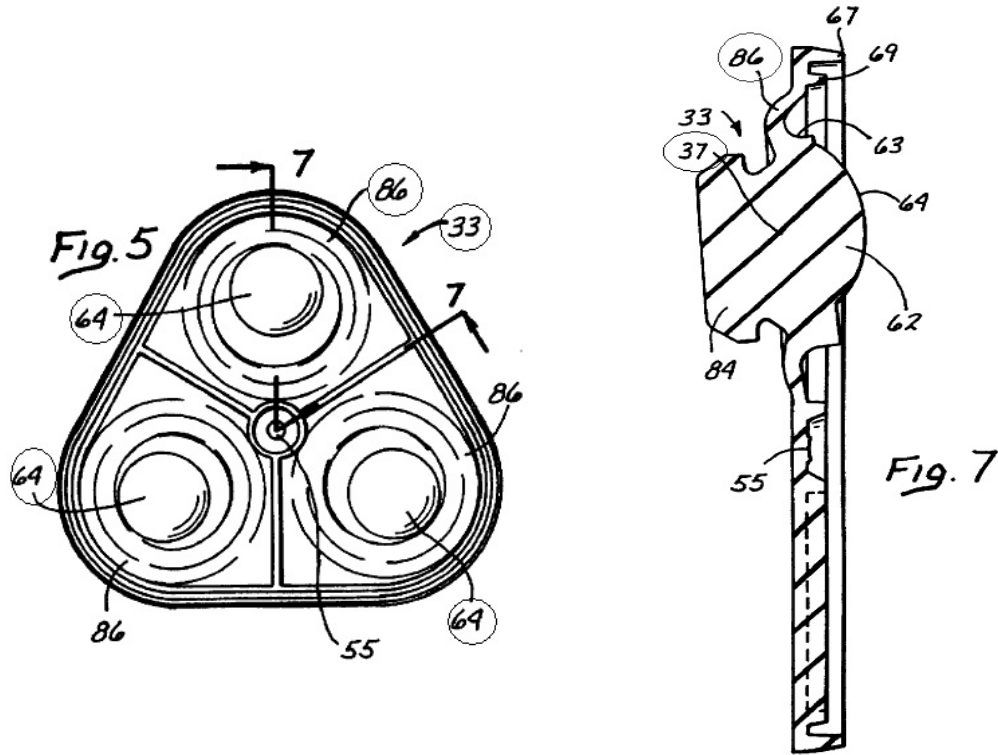
“the thickness of the generally annular region increases as the region approaches the pumping member”

Claim 12 of the ’882 Patent contains the term “the thickness of the generally annular region increases as the region approaches the pumping member.” Defendants contend that the term is indefinite. After a review of the arguments and relevant evidence, the Court concludes that the term “the thickness of the generally annular region increases as the region approaches the pumping member” meets the definiteness requirement of 35 U.S.C. § 112, ¶ 2 .

Defendants contend that although the specification describes the generally annular region as an increasingly thickened convolute where “the portion of the convolute which is radially remote from the pumping member is more thin or less thick than is the portion of the convolute which is radially close to or adjacent the pumping member,” the specification lacks any guidance as to the location and size of these “portions.” ’882 Patent, col. 3:39–43. Thus, Defendants argue that without any indication of where these “portions” are located in the generally annular region, a person skilled in the art would be unable to determine how to avoid infringing the patent.

The claim words of the disputed term are sufficiently definite to inform the public of the bounds of the invention. Defendants’ argument essentially alleges that the “portions” discussed in the “Summary of the Invention” are not adequately defined elsewhere in the specification. However, Defendants’ allegation does not bear on the question of Claim 12’s definiteness because the allegedly objectionable “portions” language is from the specification, not from Claim 12. The definiteness requirement requires the scope of claims to be sufficiently definite, and the claim words of the disputed term at issue are readily understood with reference to the specification.

Indeed, the generally annular region is expressly identified in at least three different drawings of the ’882 Patent. SHURflo points to Figure 7 in arguing that the term is adequately described in the specification. In Figure 7, produced below, the generally annular region 86 is shown in a cross-sectional view of the pumping member. The words “annular region” indicate a ring-shaped area. This is supported by the specification, which describes the generally annular region as something that “circumscribes central piston surface 64 and which flexes as the pumping member 37 moves between inlet and discharge strokes.” ’882 Patent, col. 6:11–12, *see also* ’882 Patent, col. 3:30–34 (“In yet another aspect of the present invention, the gasket or diaphragm includes a generally annular zone or region, preferably substantially circumscribing a pumping member which flexes when the pumping member is driven by a drive.”). After examining Figure 7 in view of the specification, any further ambiguity regarding the generally annular region is clarified in Figure 5, produced below, which shows three pumping members—indicated by the labeled central piston surface 64—and the generally annular region 86 that circumscribes each member. In operation, the generally annular regions flex to accommodate the motion of the pumping member moving back and forth perpendicular to the plane of the diaphragm 33. *See* ’882 Patent, col. 6:10–13.



Figures 5 and 7 of the '882 Patent

In addition, relative to the overall pumping mechanism, one of ordinary skill in the art may envision operation with reference to Figure 2, produced below, which shows both the generally annular region 86 and the pumping member—indicated by labeling of central piston surface 64 and head portion 62. Finally, in view of the specification, one of ordinary skill in the art would find the relative location of the generally annular region(s) and the pumping member(s) in both Figures 3 and 6, which reveal these items with less precise labeling.

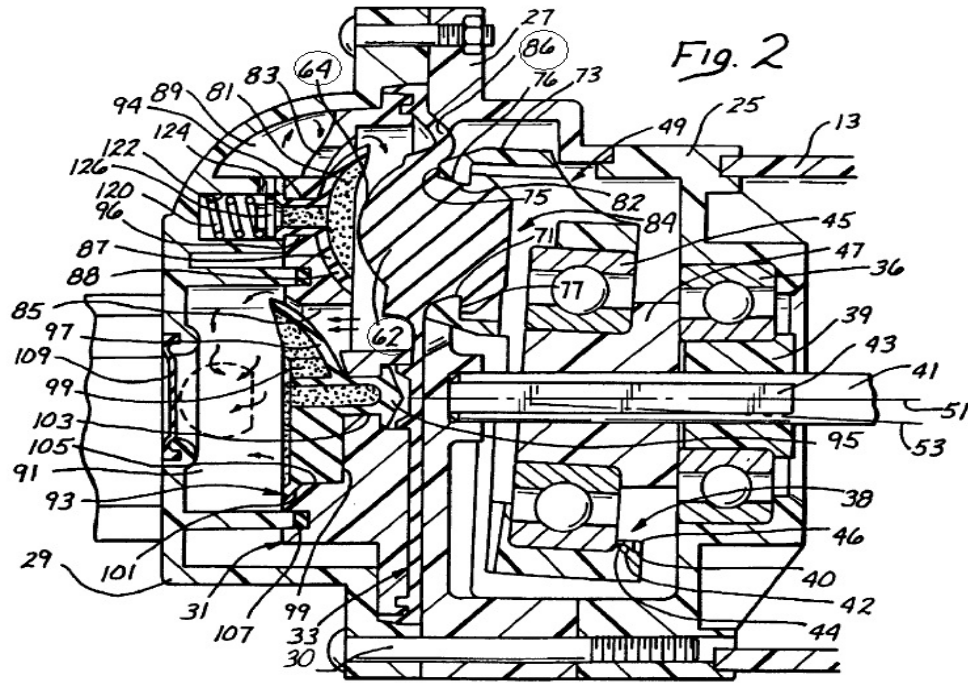


Figure 2 of the '882 Patent

Once the identity and nature of the generally annular region are understood, the assessment of the “thickness” increase is relatively straight-forward. The disputed claim term states that “the thickness of the generally annular region increases as the region approaches the pumping member.” This term may be assessed with reference to the cross-sectional view of Figure 7 where the generally annular region 86 visibly thickens as it gets closer to the pumping member 37. In addition, the written specification clearly describes the thickening, which may be understood at least with reference to Figures 5 and 7. For example, in describing the preferred embodiment, the specification states that, “[t]he thickness of diaphragm 33 progressively increases in annular zones 86 from a point remote from the pumping member 37 to a point adjacent the pumping member. ’882 Patent, col. 6:22–26. Thus, at least from Figures 5 and 7, and the written specification, it is clear that the meaning of the claim is discernible and the term is not insolubly ambiguous.

While the term is not insolubly ambiguous, a dispute remains as to the term's construction. SHURflo contends that the term means "at least some portion of the annular region which is radially close to or adjacent the pumping member is thicker than at least some portion of the annular region which is radially remote from the pumping member." Defendants assert that SHURflo's proposed construction amplifies the ambiguity that exists in the specification, rather than clarifying the claim language. Defendants further argue that SHURflo's proposed construction would allow "an untold number of portions giving rise to a wide variety of thickness profiles, not just those that are increasing or progressively increasing in the direction of the pumping member." Defendants' Indefiniteness Brief, at 10. Moreover, Defendants contend that SHURflo's proposed construction is inconsistent with the plain language of the claim because "the increasing thickness limitation is unambiguously made with respect to the entire generally annular region . . . not just portions of it." Defendants' Responsive Brief, at 10. The specification does not contemplate an embodiment where a generally annular region is anything less than a generally ring shaped area that completely circumscribes a pumping member. For example, neither the plain words of the term (i.e., "annular" means ring-shaped), nor anything in the intrinsic record can support a "generally annular" region that is merely a bump in the diaphragm or a portion of a ring in the diaphragm (i.e., an arcuate portion). Thus, when the '882 Patent refers to a portion of the convolute that is "radially remote" and "radially close" to the pumping member, it is referring to a whole ring-shaped area at a certain radius from the pumping member. This is abundantly clear in the specification:

In yet another aspect of the present invention, *the gasket or diaphragm includes a generally annular zone or region*, preferably substantially circumscribing a pumping member which flexes when the pumping member is driven by the drive. In one embodiment, this region can be considered to be a convolute which facilitates the movement of the pumping member in the intake and discharge strokes, while reducing the amount of stress on the diaphragm caused by this motion. This

facilitates maintaining a long effective life of the gasket or diaphragm. *In a particularly useful embodiment, the thickness of the convolute increases, more preferably progressively increases, as the convolute approaches the pumping member. In other words, the portion of the convolute which is radially remote from the pumping member is more thin or less thick than is the portion of the convolute which is radially close to or adjacent the pumping member. Having a convolute which is thicker and more durable close to the pumping member is effective in offsetting the increased stress that exists close to the pumping member.*

'882 Patent, col. 3:30-50 (emphasis added).

Since the claim calls for the “thickness of the generally annular region” to increase and the generally annular region must be annular (i.e. ring-shaped), then the Court must conclude that it is the ring-shaped area that must increase in thickness with radial proximity to the pump head. To be clear, the Court concludes that the claim requires exactly as it states—that the thickness of the whole circumscribing (“annular”) region increases as the region approaches the pumping member.

Defendants propose that, should the term require construction, it means “the thickness of the generally annular region progressively increases in the direction of the pumping member.” SHURflo counters that Defendants’ proposed construction is unduly narrow in that “progressively increases” is used to describe a preferred, not a limiting, embodiment in the specification. '882 Patent, col. 3:39–43. “[P]articular embodiments appearing in a specification will not be read into the claims when the claim language is broader than such embodiments.” *Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994); *see also Phillips*, 415 F.3d at 1323. The Court agrees with SHURflo that Defendants’ provisional construction is too narrow because the increase in thickness need not be uniform or progressive. As the claim states, the thickness must simply increase as the pumping member is approached.

In order to avoid further disputes between the parties, the Court will explain further. To show infringement, SHURflo must prove that Defendants’ product comprises a ring-shaped region

with a pumping member generally within the ringed-area. The ring-shaped area need not be a perfect circle but one should be able to define radial lines emanating from the pump member and extending like radii through the annular region. For any such radius, when moving along the radius in the generally annular region, the thickness of the generally annular region must increase from a point in the annular region most remote from the pump member, to a point in the annular region most proximate to the pump member. Furthermore, since the claim states “the thickness of the generally annular region increases as the region approaches the pumping member,” the thickness of the region may not decrease along any such radius. The Court provides this explanation so that the claim term may neither be interpreted so narrowly as to require a “progressive” thickness increase, nor so broadly as to allow thickness to decrease with radial proximity to the pumping member.

Because Defendants have not shown by clear and convincing evidence that the term “the thickness of the generally annular region increases as the region approaches the pumping member” is indefinite, Defendants’ Motion for Summary Judgment of Indefiniteness of the ’882 Patent (Docket No. 74) is **DENIED**. In addition, the claim language is clear and understandable to the fact finder, and any substitute for the claim language is likely to cause confusion rather than aid. Thus, the Court declines to define this term. However, the Court has resolved the parties’ disputes in accordance with *O2 Micro International Ltd. v. Beyond Innovation Technology Co.*, 521 F.3d 1351 (Fed. Cir. 2008), and to the extent that this claim term arises at trial, the Court instructs the parties to tailor their trial arguments to conform with this Order.

“a plurality of different sets of elements”

Claim 5 of the ’662 Patent and Claims 1, 11, and 18 of the ’767 Patent contain the term “a plurality of different sets of elements.” SHURflo contends that “a plurality of different sets of

elements” means “at least two or more sets of elements, the sets different from one another in either the number of elements in each set or the kind of elements in each set.” Defendants contend that the term means “at least two or more sets of elements lacking common elements whereby each set is uniquely tailored to a particular pump configuration.” The parties disagree as to whether a set of elements can share common elements with another set of elements.

SHURflo asserts that its proposed construction is consistent with the ordinary meaning of the words, but presents no support for its narrowing of the claim language by inserting a limitation that the differences in each set be differences in number or kind of elements only. The claim language and specification allow for a situation where two different sets may have the same number and kind of elements, but are perhaps arranged differently to hold differently configured pumps to the housing. Thus, SHURflo’s proposed construction is too narrow and improper.

Defendants assert that the specification and the prosecution history support their proposed construction. Specifically, the specification provides that “[e]ach set of elements or features *preferably* is exclusive in that element or elements in any given set do not cooperate with the element or elements of any other set in holding a pump to the housing.” ’662 Patent, col. 2:12–15. In addition, Defendants argue that the prosecution history supports their proposed construction because the patentee argued during prosecution that the different sets of elements were novel in order to overcome the Hoss prior art reference cited by the U.S. Patent and Trademark Office. Defendants focus on the following paragraph in the prosecution history:

With reference to FIG. 12 and to column 4, line 35 to 5, line 60 of Hoss, these sets 58, 60 of support elements are clearly designed for one specific type or “configuration” of engine and not for more than one engine having different configurations. Similarly, none of the other references cited by the Examiner employ different sets of elements adapted to hold or secure different types of pumps as claimed in each of claims 4, 5, 7, 34, and 41 of the present application. In each case,

the sets of elements used are specifically adapted to hold one (and only one) type or "configuration" of device.

Defendants' Responsive Brief, Exhibit K, at 3. Defendants contend that the italicized phrase is referring to the claims of the '662 Patent, not the prior art references, and that the phrase represents the patentee's narrowing of the claim term during prosecution.

In response, SHURflo first argues that Defendants' proposed construction seeks to limit the claims to the preferred embodiment of the invention. A preferred embodiment disclosed in the specification is not a claim limitation, and the Court refuses to import the "exclusivity" limitation from the preferred embodiment into the claims. *See Phillips*, 415 F.3d at 1323. Second, SHURflo contends that Defendants' reliance on the prosecution history to support its "exclusivity" argument is misplaced. SHURflo argues that the italicized phrase is referring to the prior art references, not the claims of the '662 Patent, and nowhere does the patentee assert the absence of common elements in any of the plurality of "different sets of elements."

The prosecution history does not support Defendants' argument. In the quoted paragraph above, the patentee is merely arguing that each of the different sets of elements was adapted for differently configured pumps, not that the sets of elements could not share elements or that each set of elements could only fit one pump. Because the disclaimer of claim scope is not clear and unmistakable, the doctrine of prosecution disclaimer does not apply in this case. *See Computer Docking Station Corp.*, 519 F.3d at 1374. Accordingly, the Court rejects both parties' proposed constructions and construes the term "a plurality of different sets of elements" to mean "two or more sets of elements where no two sets are the same."

“each of said different sets of elements being adapted to at least assist in holding one of a plurality of differently configured pumps to the housing”

Claim 5 of the '662 Patent and claims 1, 11, and 18 of the '767 Patent contain the term “each of said different sets of elements being adapted to at least assist in holding one of a plurality of differently configured pumps to the housing.” SHURflo contends that the term means “each different set of elements having the capacity to at least assist in holding one of the differently configured pumps to the housing.” Defendants contend that the term means “each of the different sets of elements is uniquely tailored to assist in holding only one of the differently configured pumps.” The parties disagreement centers around two main disputes: (1) whether the term requires exclusivity between the different sets of elements; and (2) the construction of the phrase “adapted to.” Because the parties’ first dispute was addressed under the previous disputed claim term, there is no need to repeat the parties’ arguments or the Court’s analysis. For the same reasons discussed above, a requirement of exclusivity between the different sets of elements is not supported by the claim language, the specification, or the prosecution history. The Court will address the parties’ second dispute in some detail as it is a source of disagreement among the parties in many of the remaining disputed terms.

SHURflo contends that the term “adapted to” means “having the capacity to,” while Defendants contend that the term means “uniquely tailored.” Although SHURflo offers no persuasive support for its proposed construction of the term, it argues that Defendants proposed construction lacks support in the intrinsic record. Specifically, SHURflo argues that the prosecution history merely shows that the claimed “different sets of elements” are capable of holding “pumps of different configurations.” SHURflo’s Reply Brief, at 5. Neither ordinary meaning nor any proper influence of the specification suggests that the phrase “adapted to” should be interpreted to mean

“uniquely tailored.” Such a construction would be a severe narrowing of the ordinary meaning, which is not appropriate because there is no clear definition or disclaimer in the intrinsic record. On the other hand, Defendants argue that SHURflo’s proposed construction is too broad because “[s]omething may have a capacity for a use (e.g., through misuse or incidental use) without being made fit for that use.” Defendants’ Responsive Brief, at 14. Indeed, in view of the specification, simple capacity does not reflect the intended meaning of “adapted to.” Thus, SHURflo’s proposed construction of “having the capacity to” is much broader than “adapted to.”

Understanding that extrinsic evidence is less significant than the intrinsic record, it is helpful in this instance to look at the dictionary definition of the word “adapted.” Merriam–Webster’s Online Dictionary defines the term “adapted” to mean “to make fit (as for a specific or new use or situation) often by modification.” In addition, the claim language itself is instructive, stating “each of said different sets of elements being adapted to at least assist in holding one of a plurality of differently configured pumps to the housing.” The ordinary meaning of the phrase “adapted to” is precisely consistent with the claim in that each “set” of elements is “made fit” to assist in holding a pump. As seen in Figures 1 through 4 of the specification, the “sets” of elements are “made fit” by the placement and section of clips, holes, cavities and other items that contribute to holding the pump. Thus, the “adaptation” of an element set is illustrated by this placement and selection of elements, which is a designed or configured feature of the element set.

Because SHURflo’s proposed construction is too broad and Defendants’ proposed construction is too narrow, the Court construes the term “adapted to” to mean “designed or configured to.” The Court’s construction gives the term the appropriate amount of breadth consistent with the specification. Accordingly, the Court construes the term “each of said different sets of

elements being adapted to at least assist in holding one of a plurality of differently configured pumps to the housing” to mean “each different set of elements is designed or configured to assist in holding one of the differently configured pumps to the housing.”

“the hole being sized and adapted to receive a portion of a pin” and “at least one hole sized and adapted to receive a fastener therein to secure a pump having the first pump configuration to the housing”

Claims 4, 12, and 18 of the ’767 Patent contain the term “the hole being sized and adapted to receive a portion of a pin,” and Claim 27 of the ’767 Patent contains the term “at least one hole sized and adapted to receive a fastener therein to secure a pump having the first pump configuration to the housing.” The parties’ dispute centers around the meaning of the term “adapted to.” Because the same dispute was addressed under the previous disputed claim term, there is no need to repeat the parties’ arguments or the Court’s analysis. For the same reasons discussed above, “adapted to” means “designed or configured to.” Accordingly, the Court construes the term “the hole being sized and adapted to receive a portion of a pin” to mean “the hole being designed or configured to receive a portion of a pin” and construes the term “at least one hole sized and adapted to receive a fastener therein to secure a pump having the first pump configuration to the housing” to mean “one or more holes designed or configured to receive a fastener to secure a pump having the first pump configuration to the housing.”

“clips” and “cavity clip”

Claims 1 and 6 of the ’767 Patent contain the term “clips” and Claim 11 of the ’767 Patent contains the term “cavity clip.” SHURflo contends that “clips” means “pieces that are capable of holding something (i.e., a portion of a pump in place),” while Defendants contend that “clips” means

“devices that are capable of gripping something (i.e., a portion of a pump).” Thus, the parties dispute whether “clips” should be construed to “hold” or to “grip.”

SHURflo argues that because the specification states “the clips . . . act to hold the pump,” this describes the functionality of the clip to encompass more than just gripping. Defendants contend that the patentee distinguished “clip” from “hold” in the prosecution history, making clear that “clipping” was more specific than just “holding.” Defendants cite to the following sentence in the prosecution history: “All of Hoss’ protruding fingers are guides only; they are not *clips* that are adapted to *hold* (i.e., grip or secure) a pump as they must do in a vertically mountable holder.” Defendants’ Responsive Brief, Exhibit M, at 3. Although the prosecution history is relevant in showing the patentee’s use of the words “grip” and “hold” with respect to the word “clip,” a disclaimer of claim scope is not clear and unmistakable and thus, the doctrine of prosecution disclaimer does not apply in this case. *See Computer Docking Station Corp.*, 519 F.3d at 1374. Defendants further assert that SHURflo’s proposed construction exceeds the ordinary and plain meaning of “clips” and broadly encompasses any pieces capable of holding something in place such as a “hook” or a “pin.” The specification discloses several mechanisms for holding—“pin,” “clip,” “hook,” etc. Because these different elements are claimed as separate structures in the patent, SHURflo’s proposed construction for “clips” is clearly too broad.

Further, although Defendants’ proposed construction is truer to some “clip” embodiments, the specification also discloses a “clip” embodiment that holds something by pushing against it. For example, the cavity clip 20 in Figure 5 of the ’767 Patent, produced below, holds the pump 50 by pushing against it. The pushing embodiment is also consistent with the ordinary meaning of “clips,” which are sometimes configured like the specification’s cavity clip (e.g., a clip board). Accordingly,

the Court construes the term “clips” to mean “devices that assist in holding something by gripping it or pushing against it.”

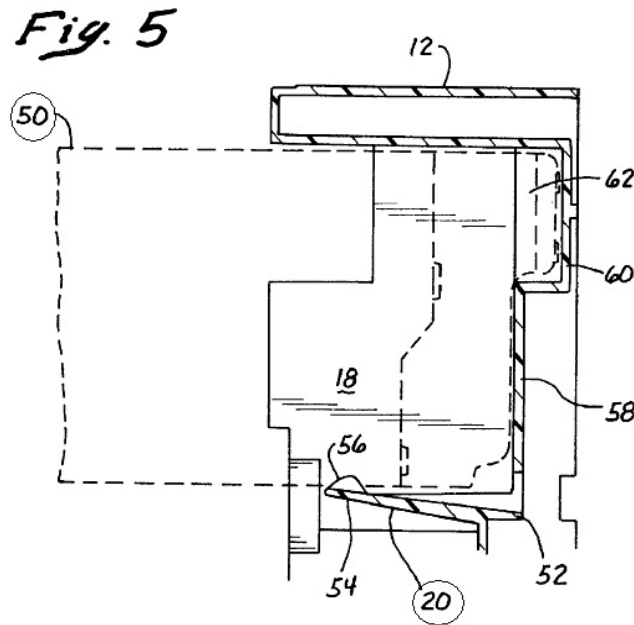


Figure 5 of the '767 Patent

With respect to the term “cavity clip,” the parties recognize that a “cavity clip” is a “clip” located within a cavity, but disagree both as to the cavity clip’s function and whether the item being held by the clip must also be within the cavity. SHURflo contends that the term “cavity clip” means “a piece in the hollow portion of the housing that is capable of holding something,” while Defendants contend that the term means “a device that grips something (i.e., a pump) in place within a cavity.” Defendants argue that SHURflo’s proposed construction fails to specify that both the cavity clip and the something (i.e., a pump) that is being gripped must be within the cavity. Defendants’ Responsive Brief, at 21. In view of the specification and Figure 5 of the ’767 Patent, it is apparent that the “cavity clip” is a clip within the cavity. However, the specification does not

disclose that the entire item being gripped must also be within the cavity. Indeed, the claim language specifically claims a “cavity clip being adapted to hold the *received portion* of the pump in the cavity.” ’767 Patent, col. 8:67 & col. 9:1–2 (emphasis added). Thus, any construction requiring that the whole clipped item exist in the cavity would be more narrow than the claim, which merely calls for a “portion” to reside in the cavity. Accordingly, the Court construes “cavity clip” to mean “a device within a cavity that assists in holding something by gripping it or pushing against it.”

“hook”

Claims 4, 12, 18, and 31 of the ’767 Patent contain the term “hook.” SHURflo contends that “hook” means “a curved or bent device meant to catch or fasten something (e.g., a pump),” while Defendants contends that “hook” means “a piece of rigid material formed into a curve or an angle for holding something (e.g., a pump).” The parties’ dispute centers around whether a “hook” must be rigid.

Other than a hook’s function of holding something, there is nothing inherent about the term “hook” that would imply a necessary level of rigidity. Hooks may be flexible or otherwise non-rigid as long as their structural integrity allows them to serve their function (e.g., a hook made of plastic or rubber may be noticeably non-rigid). Furthermore, other than implication of the function of a hook, nothing in the intrinsic or extrinsic evidence suggests that “hook” should be confined to “a piece of rigid material.” Thus, rigidity is not a requirement, and Defendants’ proposed construction is improper. However, a hook must be of structural ability to function as a hook in some meaningful context. The claims do not use the term “hook” to simply refer to a piece of curved or bent material. The claims use the term “hook” to refer to the common device that every juror will understand.

Defendants argue that the words “meant” and “catch” in SHURflo’s proposed construction

are ambiguous, vague, and subjective, and that SHURflo's definition can easily be confused with the several other mechanisms disclosed in the patent. The Court agrees that SHURflo's proposed construction will be unhelpful to the jury. The claim language is clear and understandable to the fact finder and does not require construction. *See Orion IP, LLC v. Staples, Inc.*, 406 F. Supp. 2d 717, 738 (E.D. Tex. 2005) (Davis, J.) (stating that "although every word used in a claim has meaning, not every word requires construction" in declining to construe claim terms). However, the Court has resolved the parties' disputes in accordance with *O2 Micro*, 521 F.3d 1351, and to the extent that this claim term arises at trial, the Court instructs the parties to tailor their trial arguments to conform with this Order.

"pin"

Claims 4, 12, and 18 of the '767 Patent contain the term "pin." SHURflo contends that "pin" means "a piece used to attach or support," while Defendants contend that "pin" means "a separate elongated fastener." The parties' dispute centers around whether a fastener must be "separate" and "elongated."

SHURflo's proposed construction is again unduly broad as the several other mechanisms disclosed in the patent would seem to fit the definition (e.g., a "hook" or "clip" is used to attach or support). Defendants argue that because the specification provides "[p]ins or screws 82 are placed into through bores 80 and into holes 24 where they are secured," a pin is necessarily a "separate elongated fastener" to attach a pump to the housing. '767 Patent, col. 6:34–36. Although Defendants are correct that a "pin," as disclosed in the cited embodiment, is not integral with the housing, the specification does not indicate that the "pin" must be completely separate. In addition, the term "pin" is a commonly understood word and there is no support in the specification to limit

“pin” to an “elongated” fastener. Although “pins” are generally elongated (e.g., sewing pin, cotter pin, or split pin), a “pin” does not necessarily have to be elongated (e.g. pushpin or thumbtack). Rather, the essence of a “pin,” as used in the specification and elsewhere, is that it works by being inserted through bores and holes to fasten or hold by insertion. *See* ’767 Patent, col. 6:34–36. Accordingly, the Court construes the term “pin” to mean “a device not integral with the housing that assists in holding something by insertion.”

“the combination of the hook, the hole and the pin being effective to hold the pump received by the hook to the housing”

Claims 4, 12, and 18 of the ’767 Patent contain the term “the combination of the hook, the hole and the pin being effective to hold the pump received by the hook to the housing.” SHURflo contends the term means “the hook, the hole, and the pin together are capable of supporting the pump that is received by the hook to the housing.” Defendants contend that the term means “the functional and structural cooperation of the hook, the hole and the pin result in the pump being received by the hook being held to the housing such that eliminating any one of them causes a failure to hold the pump in the housing.”

SHURflo’s proposed construction would merely require that the combined elements “be capable of holding” the pump, when the claim clearly requires that the elements “be effective to hold” the pump. This construction is unduly broad because something may be capable of holding, but not be effective to hold. In addition, neither intrinsic nor extrinsic evidence supports Defendants’ proposed requirement that the mechanism must fail if one element is removed. The claim language clearly says that the three combined elements are effective to hold the pump. However, this does not necessarily preclude any one element, either alone or in combination with another element, from

being effective to hold the pump. SHURflo's Reply Brief, at 7–8. Thus, Defendants' proposed construction is improper.

The claim language is clear and understandable to the fact finder and does not require construction beyond its plain and ordinary meaning. *See Orion*, 406 F. Supp. 2d at 738 (stating that “although every word used in a claim has meaning, not every word requires construction” in declining to construe claim terms). However, the Court has resolved the parties' disputes in accordance with *O2 Micro*, 521 F.3d 1351, and to the extent that this claim term arises at trial, the Court instructs the parties to tailor their trial arguments to conform with this Order.

“lever including a second aperture”

Claim 1 of the '936 Patent contains the term “lever including a second aperture.” SHURflo contends that the term means “an extension of the bracket that is moveable, the extension including a second hole or aperture.” Defendants contend that the term means “a moveable extension of the bracket containing a second hole.” The only substantive difference between the parties' proposed constructions is the Defendants' use of the word “containing” instead of the claimed word “including.” Because the word “including” is specifically used in the claim and it is clear and easily understandable to the fact finder, the Court construes the term “lever including a second aperture” to mean “a moveable extension of the bracket including a second hole or aperture.”

“boss”

Claim 1 of the '936 Patent contains the term “boss.” SHURflo contends that “boss” means “an area raised with respect to some other area,” while Defendants contend that “boss” means “a structure residing on a flat body.” The parties dispute whether a “boss” is merely a “structure” or a “raised area.”

SHURflo argues that its proposed construction is consistent with the ordinary meaning of the word and the specification, which refers to “raised bosses 50.” ’936 Patent, col. 14:63. SHURflo argues that Defendants’ proposed construction fails to take into account the raised geometry of a “boss.” Defendants contend that the specification’s use of the term “raised bosses” and the use of the phrase “at least one boss includes two bosses raised from the substantial planar body” in claim 7 of the ’936 Patent indicate that a “boss” is not necessarily “raised.” ’936 Patent, col. 14:63; col. 20:61–63.

The specification’s consistent use of “raised” with “boss” provides strong evidence that the patent’s use of “boss” is not merely intended to be a “raised area.” To construe it as such would inappropriately eliminate meaning from either the word “raised” or the word “boss,” which fundamentally refers to a protrusion. Moreover, Claim 7 uses the term “raised” when referring to the term “boss” to specify that the projections extend roughly perpendicular to the “substantially planar body.” ’936 Patent, col. 20:57–63. In view of the claim language, the specification, and the plain and ordinary meaning of the term “boss,” the Court construes the term “boss” to mean “a three dimensional body or structure extending from the planar body.”

“adapted to be received”

Claim 1 of the ’936 Patent contains the term “adapted to be received.” SHURflo contends the term “adapted to be received” means “having the capacity to be accepted or supported,” while Defendants contend the term does not require construction and the term should carry its ordinary and customary meaning. Even though Defendants do not propose that “adapted to” be construed to mean “uniquely tailored” in this instance, the parties have consistently disagreed as to the proper construction of the term “adapted to.” Thus, it is appropriate to construe the term “adapted to be

received” consistent with previous constructions involving the term “adapted to.” For the same reasons discussed above, “adapted to” means “designed or configured to.” Accordingly, the Court construes the term “adapted to be received” to mean “designed or configured to be received.”

“adapted to contact”

Claim 1 of the ’936 Patent contains the term “adapted to contact.” Defendants contend the term “adapted to contact” is indefinite. After a review of the arguments and relevant evidence, “adapted to contact” meets the definiteness requirements of 35 U.S.C. § 112, ¶ 2 .

Claim 1 claims “at least one boss adapted to contact the second protrusion of the pump.” ’936 Patent, col. 20: 45–46. The specification describes the related functionality of the disclosed “bosses” as follows: “the raised bosses 50 receive a rail or other protrusion of the pump 48.” ’936 Patent, col. 14: 66–67. Figure 4 of the ’936 Patent, produced below, shows the pump 48 and two bosses 50. Defendants assert that the patent does not identify a rail or protrusion of the pump or disclose how the raised bosses receive a rail or other protrusion of the pump. Further, because the back side of the pump is not shown in Figure 4, Defendants argue that “the reader is left to completely guess, right or wrong, as to what the patentee considered to be a ‘second protrusion’” of the pump in Claim 1. Defendants’ Indefiniteness Brief, at 13. Defendants further assert that the specification lacks any reference to the functional term “adapted to contact” with respect to a boss and a protrusion of the pump and the figures do not show “contact” between the two items. Thus, Defendants argue that a person of ordinary skill in the art could not discern how the bosses described in the specification are “adapted to contact” a protrusion of the pump.

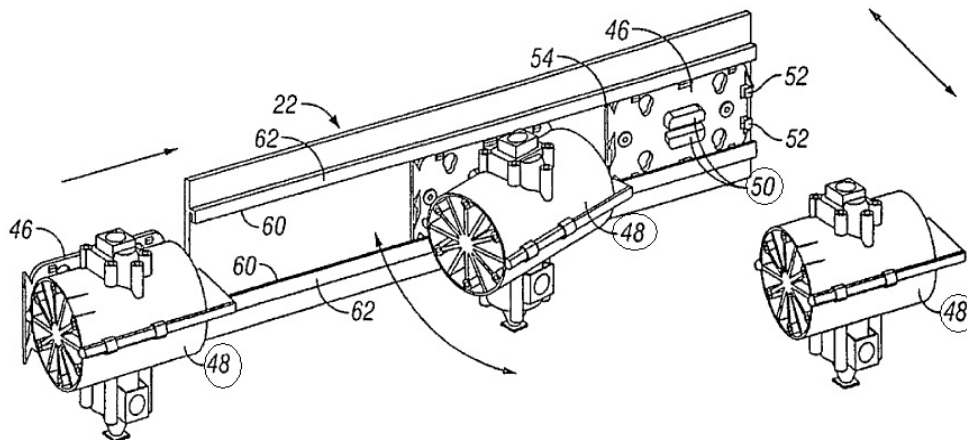


FIG. 4

Figure 4 of the '936 Patent

SHURflo argues that a person of ordinary skill in the art would understand from the written specification and figures that the pump “is intended to be symmetric, and that a rail similar to the rail shown on the front of the pump 48 contacts the raised bosses 50 when the pump is engaged in the bracket.” SHURflo’s Responsive Indefiniteness Brief, at 8. SHURflo further argues that the specification does not have to show the exact point at which the bosses contact the protrusion in order for one of ordinary skill in the art to “understand from Figure 4[,] and the specification describing that Figure[,] that the bracket’s raised bosses frictionally engage . . . the protrusion or rail on the pump.” *Id.* at 16.

“When a claim limitation is defined in purely functional terms, the task of determining whether that limitation is sufficiently definite is a difficult one that is highly dependent on context (e.g., the disclosure in the specification and the knowledge of a person of ordinary skill in the relevant art area).” *Halliburton*, 514 F.3d at 1255. The claim language and specification undermine Defendants’ contention that the term “adapted to contact” is indefinite. It is clear that a person of ordinary skill in the art would understand that the pump is symmetrical and that the bosses

functionally engage the protrusion on the pump to support the pump. Accordingly, because Defendants have not shown by clear and convincing evidence that the term “adapted to contact” is indefinite, Defendants’ Motion for Summary Judgment of Indefiniteness of the ’936 Patent (Docket No. 74) is **DENIED**. Further, while the term is not insolubly ambiguous, because the parties have consistently disagreed as to the proper construction of the term “adapted to,” the Court construes “adapted to contact” to mean “designed or configured to functionally engage.”

“impeller assembly operatively coupled to said motor”

Claims 1 and 11 of the ’437 Patent contain the term “impeller assembly operatively coupled to said motor.” SHURflo contends the term means “a rotating impeller apparatus coupled directly or indirectly to the pump motor so that they are operable together.” Defendants contend that the term means “a rotating impeller apparatus coupled directly to the pump motor so that they are operable together when the impeller apparatus is not locked.” The parties’ dispute centers around whether the phrase “operatively coupled” should be limited to “indirect” coupling.

Both parties agree that “magnetic” coupling is a type of “indirect” coupling. Defendants assert that the only embodiment disclosed in the specification is an impeller assembly coupled to a motor through a magnetic coupling. The magnetic coupling allows the motor to slip if the impeller locks. This means the motor is free to disengage from turning the impeller when the impeller locks and the impeller and motor stop turning together. In a “direct” coupling, the motor locks when the impeller locks. Defendants argue that the specification does not disclose a motor that is “directly” coupled and that “[d]irect coupling does not ‘naturally align’ with the specification’s disclosure of indirect coupling because the motor circuit would not function as described by the patent if the impeller and motor were directly coupled.” Defendants’ Responsive Brief, at 28. SHURflo counters

that claims cannot be limited to embodiments disclosed in the patent, even if the patent discloses only one embodiment. In addition, SHURflo argues that Claims 4 and 10 of the '437 Patent depend from Claim 1 and specifically require a “magnetic coupling.” Thus, SHURflo argues that under the doctrine of claim differentiation, Claims 1 and 11 are broader than Claims 4 and 10.

There is nothing in the claim language or the specification that limits “operatively coupled” to “indirect” coupling. Although the specification only discloses “magnetic” coupling, the patentee chose to claim the coupling more broadly by using the term “operatively coupled.” In addition, because courts presume a difference in meaning and scope when a patentee uses different phrases in separate claims, the doctrine of claim differentiation applies in this case and “operatively coupled” must be read to include both “direct” and “indirect” coupling. *See Phillips*, 415 F.3d at 1314–15. Accordingly, the Court adopts SHURflo’s construction and construes the term “impeller assembly operatively coupled to said motor” to mean “a rotating impeller apparatus coupled directly or indirectly to the pump motor so that they are operable together.”

CONCLUSION

For the foregoing reasons, the Court interprets the claim language in this case in the manner set forth above. Furthermore, Defendants’ Motion for Summary Judgment of Indefiniteness of the '882 Patent and '936 Patent (Docket No. 74) is **DENIED**. For ease of reference, the Court’s claim interpretations are set forth in a table as Appendix A.

So ORDERED and SIGNED this 19th day of January, 2010.

A handwritten signature in black ink, appearing to read 'Leonard Davis', written over a horizontal line.

LEONARD DAVIS
UNITED STATES DISTRICT JUDGE

APPENDIX A

Claim Term	Court's Construction
the ratio, R_3 , of the difference between the inlet valve center point and the valve plate inlet center point to R_2 is at least about 0.15 ('183 Patent, Claim 10)	the ratio R_3 (i.e., the difference between the inlet valve center point and the valve plate inlet center point divided by the ratio R_2) is greater than 0.14
R_2 is in a range of 1.25 to about 1.45 ('183 Patent, Claim 11)	the ratio R_2 (i.e the value of the inlet valve radius divided by the value of the valve plate inlet radius is between 1.25 and 1.459999
R_3 is in a range of about 0.15 to about 0.40 ('183 Patent, Claim 12)	the ratio R_3 (i.e., the difference between the inlet valve center point and the valve plate inlet center point divided by the ratio R_2) is in the range of 0.140001 to 0.409999
generally annular region ('882 Patent, Claim 12)	[AGREED] a ring-shaped region or zone circumscribing a pumping member
the thickness of the generally annular region increases as the region approaches the pumping member. ('882 Patent, Claim 12)	No construction necessary.
a plurality of different sets of elements ('662 Patent, Claim5) ('767 Patent, Claims 1, 11, and 18)	two or more sets of elements where no two sets are the same
each of said different sets of elements being adapted to at least assist in holding one of a plurality of differently configured pumps to the housing ('662 Patent, Claim5) ('767 Patent, Claims 1, 11, and 18)	each different set of elements is designed or configured to assist in holding one of the differently configured pumps to the housing
clips ('767 Patent, Claims 1 and 6)	devices that assist in holding something by gripping it or pushing against it
hook ('767 Patent, Claims 4, 12, 18, 31)	No construction necessary.
pin ('767 Patent, Claims 4, 12, 18)	a device not integral with the housing that assists in holding something by insertion

the hole being sized and adapted to receive a portion of a pin (’767 Patent, Claims 4, 12, 18)	the hole being designed or configured to receive a portion of a pin
the combination of the hook, the hole and the pin being effective to hold the pump received by the hook to the housing (’767 Patent, Claims 4, 12, 18)	No construction necessary.
cavity clip (’767 Patent, Claim 11)	a device within a cavity that assists in holding something by gripping it or pushing against it
at least one hole sized and adapted to receive a fastener therein to secure a pump having the first pump configuration to the housing (’767 Patent, Claim 27)	one or more holes designed or configured to receive a fastener to secure a pump having the first pump configuration to the housing
boss (’936 Patent, Claim 1)	a three dimensional body or structure extending from the planar body
lever including a second aperture (’936 Patent, Claim 1)	a moveable extension of the bracket including a second hole or aperture
adapted to be received (’936 Patent, Claim 1)	designed or configured to be received
adapted to contact (’936 Patent, Claim 1)	designed or configured to functionally engage
impeller assembly operatively coupled to said motor (’437 Patent, Claims 1 and 11)	a rotating impeller apparatus coupled directly or indirectly to the pump motor so that they are operable together